AMENDMENTS TO THE CLAIMS

Please cancel claims 1-24 and add new claims 25-31 as follows:

Claims 1-24 (canceled)

25. (new) A system for optimizing utilization of a target processor of the system, the system comprising:

a power supply coupled to the target processor by a power line;

the target processor part of a target system also comprising a target memory;

a host comprising a host memory, a host system input and a host processor, the host system input linked to the host memory, the host processor linked to the target processor;

a sensor coupled to the power line and adapted to measure a magnitude of current being consumed by the target processor, the sensor linked to the host memory;

the host memory comprising a utilization utility for determining percentage utilization of target processor based upon data received from the sensor and an average maximum current value for the target processor stored in the host memory; and

the target memory comprising a maximum current utility adapted to cause the target processor to consume increased amounts of current by the target processor at peak current usage times to increase processing speeds at peak current usage times.

26. (new) The system of claim 25, wherein the utilization utility is adapted to graphically display the calculated percentage utilization information as a function of time.

27. (new) The system of claim 25, wherein the utilization utility compares measured current by the sensor to a maximum current value stored in the host memory for the target processor.

28. (new) The system of claim 25, wherein the sensing is performed by a Hall-effect sensor.

29. (new) A method for optimizing utilization of a target processor, the method comprising:

sensing an amount of current being consumed by the target processor while executing software application;

transmitting a signal indicative of said amount of current to a host system;

comparing said amount of current against a maximum current value for the target processor but stored in a host memory;

continuously repeating the sensing, transmitting and comparing steps for a duration of said execution of said software application;

calculating, at a host processor, a percentage of the maximum current value being consumed by the target processor over time and identifying peak use times for said execution of said software application;

increasing the amount of current being consumed by the target processor at said peak use times during said execution of said software application.

30. (new) The method of claim 29, including graphically displaying results of said comparing of the current being consumed by the target processor against a maximum current value for the target processor as a function of time.

31. (new) The method of claim 29, wherein the sensing is performed by a Hall-effect sensor.